INDEX TO VOLUME XXIV, 1930

A

A.A.A.S.; Eugene Meeting, *W. E' Harper*, 313.

A.A.S.; Appointment Service, 37; Cambridge Meeting, *R. M. Stewart*, 49; Chicago Meeting, *W. E. Harper*, 393

Absorption of Light in Space, *Trumpler*, 475.

Alpha and Proxima Centauri, *E. G. Hogg*, 406; see page 473.

Annual General Meeting, R.A.S.C., 114.

Arctic; The Seismicity of the, *E. A. Hodgson*, 201.

Astrology and its Influence upon the Development of Astronomy, *Anton Pannekoek*, 159.

Astronomer—H. H. Turner; a great (from *The Times*, London), 402.

Astronomical Research during 1929, *W. E. Harper*, 97.

Astronomical Work of John S. Plaskett, *A. C. D. Crommelin*, 217.

Astronomy; Practical—for Amateurs, *E. W. Brown*, 177; A great Hobby, *A. W. Megget*, 373; Popular Articles on Astronomy, for the Press, *W. E. Harper*, 466.

Atmosphere; The Earth's, *W. E. Harper* (radio talk XXIII), 184; The Selective Character of Our, *W. E. Harper* (radio talk XXIV), 187; Exploring the Upper, *H. Bibby*, lecture before Toronto Centre, 151.

Auroral and Earthquake Phenomena, *A. F. Hunter*, lecture before Toronto Centre, 438.

B

Bauer, Dr. L. A.; Retirement of, 92.

Beals, C. S.; Subatomic Energy and Stellar Radiation (Seminar Talk, D.A.O.), 85; The Wolf-Rayet Stars, 277.

Bibby, H., lecturer before Toronto Centre, 151.

Brose, H. L., Einstein's Views on Space, 384.

Brown, E. W., Practical Astronomy for Amateurs, 177.

Buchanan, D., The Problem of Three Bodies, 347.

Building of a 19-Inch Reflecting Telescope, *R. K. Young*, 17.

C

Calendar Reform, *C. A. C.*, 289.

Cambridge Meeting of the A.A.S., *R. M. Stewart*, 49.

Canadian Geographical Society, 37.

Celestial Mechanics; The Problem of Three Bodies, *D. Buchanan*, 347.

Chant, C. A., Worcester Reed Warner, 2.

Chicago Meeting of the A.A.S., *W. E. Harper*, 393.

Coats, D. R. P., Stellagraphs: Star Pictures by Radio, 59.

Colgrove, W. G., The Sun, 327; The Moon, 409; Diana's Return (poem), 417.

Collins, J. R., lecture before Toronto Centre, 244.

Comet: An Old Poem on the —— of 1811, 235; Discovery of 1930*a*

(*Peltier*), 288; 1930*c* (Wilk), 195; 1925 XI (*Peltier-Wilk*), 195.
Congress, The Pacific Science, *W. E. Harper* (radio talk XXXI), 366.
Crommelin, A. C. D., The Astronomical Work of John S. Plaskett, 217.
Curtiss, Ralph Hamilton, *D. B. McLaughlin*, 153.

D

De Lury, A. T., The Mathematical Prelude to the Theory of Relativity, 34; lecture before Toronto Centre, 41.
De Lury, R. E., lecture before Ottawa Centre, 199.
Diana's Return; Poem by *W. G. Colgrove*, 420.
Douglas, A. V., lecture before Toronto Centre, 245; The Size of the Universe (book review), 322.
Duncan's *Astronomy* (Review of), 468.

E

Earth Beneath, The, *E. A. Hodgson*, 65.
Earthquakes—see Seismology.
Easter, The Date of, 291.
Eclipse, The Central Solar —— of April 28, 1930, *R. M. Motherwell*, 55; *C. A. C*, 242; *H. R. Kingston*, lecture before Toronto Centre, 295; *REDeL*, lecture before Ottawa Centre, 199.
Eclipse of the Sun, August 31, 1932, *R. K. Young*, 441.
Einstein Shift of Solar Lines, *C. A. C.*, 391.
Einstein's Views on Space, *H. L. Brose* (translation of Address at the University of Nottingham), 384.
English, H. W., Numerical Relations in the System of Mars, 436.
Eros, The —— Campaign, *C. A. C.*, 434, 473.
Ether Drift Experiments in 1929 and Other Evidence of Solar Motion, *D. C. Miller*, 82.
Eugene Meeting of the A.A.A.S., *W. E. Harper*, 313.
Eve, A. S., The Universe as a Whole, 251.

F

Fecker, J. W., Requirements in the Design and Construction of the Large Modern Telescope, 297.
Fireball, A Brilliant, *C. A. C.*, 40.

G

Galaxy, Rotation of the, *J. A. Pearce*, lecture before Victoria Centre, 47.
Gale, E. I., Wrinkles in the Art of Telescope Making, 333.
Gibbs, J. R., lecture before Toronto Centre, 151.
Gold, S., Seismology at the Dominion Observatory, 442.
Gordon, Kilbee, A Happy New Year (poem), 1.
Grice, Recollections of Captain John, *C. A. C.*, 39.
Groh, M. S., lecture before Toronto Centre, 244.

H

Hall, Dr. Asaph, retirement of, *R. E. DeL.*, 88.
Halo, A Solar —— Seen at Haileybury, Ont., *W. H. Tuke*, 237.
Harper, W. E., Astronomical Research During 1929; Eugene Meeting of the A.A.A.S., 313; The Forty-Fourth Meeting of the A.A.S., 393; Radio Talks on Astronomy over CFCT, 7, 10, 13, 184, 187, 359, 362, 366, 369; The Spectrum of 12 Can. Ven. (Seminar Talk, D.A.O.), 141; Popular Articles on Astronomy for the Press, 466.

Heat from the Stars, *W. E. Harper* (radio talk), 7.
Hill, S. N., The Orbit of 103 Tauri, 305.
Hobby, A Great, *A. W. Megget*, 373.
Hodgson, E. A., The Earth Beneath in the Light of Modern Seismology, 65; The Seismicity of the Arctic, 201; lecture before Montreal Centre, 46.
Hogg, E. G., The Planet Jupiter, 92; Alpha and Proxima Centauri, 406; see page 473.
Hogg, James, An Old Poem on the Comet of 1811, 235.
Hubble, E. P., Relation between Velocity and Distance, 476.
Hunter, A. F., lecture before Toronto Centre, 438.

I

Ireton, H. J. C., lecture before Toronto Centre, 150.

J

Jackson, W. E. W., Magnetic Values for Agincourt and Meanook, 457.
Jeans and Eddington, *A. V. Douglas*, lecture before Toronto Centre, 245.
Jupiter, The Planet, *W. E. Harper* (radio talk), 10; The Planet, *E. G. Hogg*, 92; Naked Eye Observation of the Satellites of, 195.

K

Kingston, H. R., lecture before Toronto Centre, 295; The Man in the Moon, 307; The Milky Way and Beyond, 452.

L

Lause, Rev. Fr., On the Periods of the Stars of the Mira-Type, 271.
Lectures before the Society: Amateur Lecture on Astronomy in England, *J. R. G.*, Tor., 151; Astrology, *A. P.*, Vic., 159; Exploring the Upper Atmosphere, *H. B.*, Tor., 151; Auroral and Earthquake Phenomena, *A. F. H.*, Tor., 438; Earth Beneath, *E. A. H.*, Mon., 46; Earthquakes, Natural and Artificial, *L. D. L.*, Ott., 42; Eclipses, *H. R. K.*, Tor., 295; Solar Eclipses, *R. E. DeL.*, Ott., 199; Rotation of the Galaxy, *J. A. P.*, Vic., 47; A Great Hobby, *A. W. M.*, Wpg., 373; Jeans and Eddington, *A. V. D.*, Tor., 245; Meteorology in Northern Ontario, *J. P.*, Ott., 95; Interesting Objects in the Sky, *R. K. Y.*, Ott., 198; Recent Discovery of Probable Planets, *R. K. Y.*, Ham., 439; The Mathematical Prelude to the Theory of Relativity, *A. T. DeL.*, Tor., 41; Some Problems of Relativity in Pnysics, *H. A. McT.*, Tor., 296; The Light of the Night Sky, *H. J. C. I.*, Tor., 150; What is a Star? R. *M. S.*, Ott., 44; Our Sun, *D. B. M.*, Ham., 248; The Formation of Images in the Telescope, *J. R. C.*, Tor., 244; The Tides, *R. K. Y.*, Tor., 42; Variable Stars, *S. R.*, Mon., 152.
Leet, L. Don, lecture before Ottawa Centre, 42.
Library, Books added to, 477.
Light, Absorption in Space, *Trumpler*, 475.
Lightning, Freakish Action of, *C. A. C.*, 243.
Lowell Observatory Observation Circular—Planet X, 282.
Lunar and Planetary Temperatures, *Pettit and Nicholson*, 476.

M

M., W. B., John Andrew Paterson, 249.
McLaughlin, D. B., Ralph Hamilton Curtiss, 153.

McTaggart, H. A., lecture before Toronto Centre, 296.
Magnetic Values for Agincourt and Meanook, *W. E. W. Jackson*, 457.
Mars, La Planète, par *E. M. Antoniadi* (review of Publication), *C. A. C.*, 339; Numerical Relations in the System of—, *H. W. English*, 436.
Marsh, Rev. Dr., lecture before Hamilton Centre, 248.
Mathematical Prelude to the Theory of Relativity, *A. T. DeLury*, 34; lecture before Toronto Centre, 41.
Meetings of the Society: at Hamilton, 247, 439; at London, 48; at Montreal, 45, 152; at Ottawa, 42, 95, 198, 293; at Toronto, 41, 150, 244, 295, 438, 478; at Victoria, 46.
Megget, A. W., A Great Hobby, 373.
Meteorology in North Ontario, J. Patterson, lecture before Ottawa Centre, 95.
Meteors, A Brilliant Fireball, *C. A. C.*, 40; A Nest of Bright ——, *C. A. C.*, 146; A Daylight ——, *C. A. C.*, 342; Shooting Stars, The Story-Tellers of the Universe, *C. P. Olivier*, 421. Bright Meteor seen in Hamilton, 473.
Miller, C. D., Ether Drift Experiments in 1929 and Other Evidences of Solar Motion, 82.
Milky Way and Beyond, *H. R. Kingston*, 452.
Mira-Type, On the Periods of the Stars of the —, *Rev. Fr. Lause*, 271.
Mitchell, S. A., Great Achievement of, *C. A. C.*, 90.
Moon, The Man in the ——, *H. R. Kingston*, 307; More about the ——, *W. E. Harper* (radio talk), 359; The ——, *W. G. Colgrove*, 409.
Moore and Menzel, Rotation of Uranus and Neptune, 475.
Motherwell, R. M., The Central Solar Eclipse of April 28, 1930, 55.

N

National Academy, Astronomical Papers at, 474.
Nebulae, Relation between Velocity and Distance, *Hubble*, 476.
Neptune, Rotation of, *Moore and Menzel*, 475.
New Year, A Happy, Poem by *Kilbee Gordon*, 1.
News and Comments, *R. E. DeL.*, 37, 88, 144, 196, 234, 287, 340, 389, 429, 470; *W. E. H.*, 472.
Notes and Queries, *C. A. C.*, 38, 89, 146, 235, 288, 342, 390, 430, 473.
Nova, Light-Curve of —— Pictoris, 236.

O

Obituaries, Worcester Reed Warner, *C. A. Chant*, 2; Ralph Hamilton Curtiss, *D. B. McLaughlin*, 153; John Andrew Paterson, *W. B. M.*, 249; H. H. Turner (from *The Times*, London), 402.
Occultations, Practical Astronomy for Amateurs, *E. W. Brown*, 177; —— of Stars, *R. K. Young*, 211.
Olivier, Charles P., Shooting Stars, The Story-Tellers of the Universe, 421.
Orbit of Pluto, 241, 282; —— of 103 Tauri, *S. N. Hill*, 305.

P

Pacific Science Congress, *W. E. Harper* (radio talk), 366.
Pannekoek, Anton, Astrology and its Influence upon the Development of Astronomy, 159.
Paterson, John Andrew, *W. B. M.*, 249; see page 479.
Patterson, John, lecture before Ottawa Centre, 95.
Pearce, J. A., lecture before the Victoria Centre, 47.

Perkins Observatory and Ohio State University, 476.
Pi, On the Value of, *J. A. P.*, 63.
Planetary and Lunar Temperatures, *Pettit and Nicholson*, 476.
Planets, The Discovery of, *W. E. Harper* (radio talk), 362; Recent Discovery of Probable, *R. K. Young*, lecture before Hamilton Centre, 439.
Plaskett, Astronomical Work of John S., *A. C. D. Crommelin*, 217; Award of R.A.S. Gold Medal to, 89; Award of Rumford Premium to, 146.
Pluto, A New Major Planet, *C. A. C.*, 193; The New Planets (?) (from the *Manchester Guardian*), 238; Lowell Observatory Observation Circular, 282; The Planet ——, 344; see Erratum, 480.
Poems, A Happy New Year, *Kilbee Gordon*, 1; Libations and Librations, *R. E. DeL.*, 145; An Old Poem on the Comet of 1811, *James Hogg*, 235; Diana's Return, *W. G. Colgrove*, 417.
Popular Articles on Astronomy for the Press, *W. E. Harper*, 466.

R

Radio Talks on Astronomy over CFCT, *W. E. Harper*, XX, Heat from the Stars, 7; XXI, The Planet Jupiter, 10; XXII, The Origin of the Solar System, 13; XXIII, The Earth's Atmosphere, 184; XXIV, The Selective Character of Our Atmosphere, 187; XXIX, More About the Moon, 359; XXX, The Discovery of Planets, 362; XXXI, The Pacific Science Congerss, 366; XXXII, Venus, The Evening Star, 369. Over CJGC, *H. R. Kingston*, The Man in the Moon, 307; The Milky Way and Beyond, 452.
Rainbow, Photograph of a, by Miss Thibaudeau, 238, by Father Rodés, 437.
Redman, R. O., Semi-regular Variables (seminar talk, D.A.O.), 381.
Relativity, The Mathematical Prelude to the Theory of, *A. T. DeLury*, 34; Some Problems of —— in Physics, *H. A. McTaggart*, lecture before Toronto Centre, 296.
Review of Publications: Modern Cosmologies, by Hector Macpherson, *C. A. C.*, 87; Météorologie du Relief terrestre, by A. Baldit, *C. A. C.*, 143; The Spectral Distributions of Stars brighter than Mag. 7.0 in the Henry Draper Catalogue, by Otto Seydl, *R. K. Y.*, 191; Introduction to Physical Optics, by J. K. Robertson, *H. A. McT.*, 191; The Development of Astrophotography and the Great Telescopes of the Future, by G. W. Ritchey, *C. A. C.*, 233; L'Ancienne et la Nouvelle Théorie des Quanta by Eugène Bloch, *E. Allin*, 285; The Size of the Universe, by Dr. L. Silberstein, *A. V. D.*, 322; Heaven and Earth, by Oswald Thomas, *C. A. C.*, 338; La Planète Mars, by E. M. Antoniadi, *C. A. C.*, 339; Determination of Orbits of Comets and Asteroids, by R. T. Crawford, *R. K. Y.*, 427; Barlow's Tables, by L. J. Comrie, *R. K. Y.*, 427; Astronomy, by J. C. Duncan, *C. A. C.*, 468; Star Clusters, by H. Shapley, *C. A. C.*, 468.
Ritchey's Great Project, 474.
Rodés, Father L., Photograph of a Rainbow, 437.
Rosseland, Svein, lecture before Montreal Centre, 152.

S

Seismology, The Earth Beneath in the Light of Modern —, *E. A. Hodgson*, 65; The Seismicity of the Arctic, *E. A. Hodgson*, 201; Auroral and Earth-

quake Phenomena, *A. F. Hunter*, 438; Earthquakes, Natural and Artificial, *L. D. Leet*, 42; Seismology at the Dominion Observatory, *S. Gold*, 442.

Seminar Talks at D.A.O.; Subatomic Energy and Stellar Radiation, *C. S. Beals*, 85; The Spectrum of 12 Can. Ven., *W. E. Harper*, 141; Semi-regular Variables, *R. O. Redman*, 381.

Shapley, H., Star Clusters (Review of), *C. A. C.*, 468.

Shooting Stars, The Story-Tellers of the Universe; *C. P. Olivier*, 421; A Brilliant Fireball, *C. A. C.*, 40; A Nest of Bright Meteors, *C. A. C.*, 146; A Daylight Meteor, *C. A. C.*, 342.

Silberstein, Dr. L., The Size of the Universe, Book review by *A. V. Douglas*, 322.

Sky, The Light of the Night, *H. J. C. Ireton*, lecture before Toronto Centre, 150; Interesting Objects in the. *R. K. Young* lecture before the Toronto Centre, 198.

Slipher, V. M., Planet X—Lowell Observatory Observation Circular, 282.

Solar Halo Seen at Haileybury, Ont., *W. H. Tuke*, 237.

Solar Lines, The Einstein Shift of, *K. Burns*, 391.

Solar System, The Origin of the, *W. E. Harper* (radio talk), 13.

Space, Einstein's Views on, *H. L. Brose*, 384.

Spectrum of 12 Can. Ven., *W. E. Harper* (seminar talk), 141.

Star, What is a, *R. M. Stewart*, lecture before Ottawa Centre, 44.

Stars: Spectrum of 12 Can. Ven., *W. E. Harper* (seminar talk), 141
The Wolf-Rayet Stars, *C. S. Beals*, 277; The Orbit of 103 Tauri, *S. N. Hill*, 305; Stereoscopic View of the Stars near the Sun, *R. K. Young*, 345; Alpha and Proxima Centauri, *E. G. Hogg*, 406.

Stellagraphs, Star Pictures by Radio, *D. R. P. Coats*, 59.

Stellar Radiation, Subatomic Energy and —, *C. S. Beals* (seminar talk, D.A.O.), 85.

Stereoscopic View of the Stars near the Sun, *R. K. Young*, 345.

Stewart, R. M., What is a Star? (lecture before Ottawa Centre), 44; The Forty-Third Meeting of the A.A.S., 49.

Subatomic Energy and Stellar Radiation, *C. S. Beals* (seminar talk, D.A.O.), 85.

Sun (a concise summary of items), *W. G. Colgrove*, 327; Our Sun, D. B. *Marsh*, lecture before Hamilton Centre, 248.

Sun-Spot Maximum; The Last, *C. A. C.*, 430.

T

Telescope: The Building of a 19-Inch Reflecting, *R. K. Young*, 17; Open Tube Construction for, *T. E. R. Phillips* and *F. J. Hargreaves*, 288; Requirements in the Design and Construction of the Large Modern—, *J. W. Fecker*, 297; Wrinkles in the Art of Telescope Making, *E. I. Gale*, 333; 6-Inch Reflector of —, *Stephen Stoot*, 342; Telescopes and Observatory Equipment, *C. A. C.*, 390; The Formation of Images in the —, *J. R. Collins*, lecture before the Toronto Centre, 244.

Temperatures of Moon and Planets, *Pettit and Nicholson*, 476.

Thomson, G. P., Waves and Particles, 129.

Three Bodies, The Problem of, *D. Buchanan*, 347.

Tides, The, *R. K. Young*, lecture before Toronto Centre, 42.
Trumpler, R. J., Absorption of Light in Space, 475.
Tuke, W. H., A Solar Halo Seen at Haileybury, Ont., 237.
Turner, H. H., A Great Astronomer (from *The Times*, London), 402.

U

Umbach, J. E., death of, 88.
Universe, The Universe as a Whole, *A. S. Eve*, 251; The Size of the —, *Dr. L. Silberstein* (book review by *A. V. Douglas*), 322; Shooting Stars, The Story-Tellers of the —, *C. P. Olivier*, 421.
Uranus, Rotation of, *Moore and Menzel*, 475.

V

Variable Stars, Locating, 235; On the Periods of the Stars of the Mira-Type, *Rev. Fr. Lause*, 271; Semi-regular Variables, *R. O. Redman* (seminar talk, D.A.O.), 381; *S. Rosseland*, lecture before Montreal Centre, 152.
Velocity, an Enormous Cosmic, 477; see page 476.

W

Warner, Worcester Reed, *C. A. Chant*, 2.
Waves and Particles, *G. P. Thomson*, 129.
Wolf-Rayet Stars, *C. S. Beals*, 277.
Wrinkles in the Art of Telescope Making, *E. I. Gale*, 332.

Y

Young, R. K., The Building of a 19-inch Reflecting Telescope, 17; lecture before Toronto Centre, 42; lecture before Ottawa Centre, 198; Occultations of Stars, 211; Stereoscopic View of the Stars near the Sun, 345; lecture before Hamilton Centre, 439; Eclipse of the Sun, August 31, 1932, 441.